

SATURDAY 06 JULY 2019

SAT 19:00 NASA: Triumph and Tragedy (b00lg2xb)
One Small Step

In 2009, NASA celebrates the 40th anniversary of the first Moon landing. This documentary series offers audiences a unique chance to glimpse an astronaut's view of space flight. It is an epic story of heroes and their breathtaking successes as they further humanity's innate desire to explore.

To land a human being on another celestial body is the first step to living beyond our planet. The breathless pace and daring of the Apollo programme sees NASA master previously unimagined tasks in an attempt to achieve the most incredible accomplishment in the history of human endeavour.

From the ashes of tragedy on Apollo 1 emerges a determination that puts Apollo 8 in orbit around the Moon ahead of schedule. Apollo 9 and 10 each break bold new ground and pave the way for something few dared to believe was possible. When Neil Armstrong and Buzz Aldrin walk on the Moon and return safely to Earth, the whole planet throws them a party.

SAT 20:00 Jet! When Britain Ruled the Skies (b01m81f5)
Military Marvels

In the heady postwar years of the 1950s and 60s, British flying was at its zenith and its aircraft industry flourished in a dazzling display of ingenuity and design brilliance. Having invented the jet engine, Britain was now set to lead the world into the jet age with a new generation of fighters and bombers. The daring test pilots who flew them were as well known as the football stars of today, while their futuristic-looking aircraft, including the Meteor, Canberra, Valiant, Vulcan and the English Electric Lightning, were the military marvels of the age.

SAT 21:00 Inspector Montalbano (b0940bf1)
A Nest of Vipers

Businessman Cosimo Barletta is found dead in his holiday home, with a gunshot to the head. Montalbano's investigation reveals a series of unexpected facts about the man's life and death - starting with the discovery of an archive of photographs of young women and continuing with the autopsy results, which indicate there might have been more to the man's killing than had initially met the eye. Salvo meets with Barletta's disowned son Arturo, and is helped in his investigation by Arturo's mysterious sister, Giovanna.

In Italian with English subtitles.

SAT 23:00 Top of the Pops (m0006gyx)

Steve Wright and Gary Davies present the pop chart programme, first broadcast on 21 January 1988 and featuring Bros, AC/DC, Joyce Sims, The Christians, Motley Crue, Bananarama, the Beatmasters ft. Cookie Crew, Dollar, Belinda Carlisle and The Stranglers.

SAT 23:30 Top of the Pops (m0006gzc)

Gary Davies and Bruno Brookes present the pop chart programme, first broadcast on 11 February 1988 and featuring Eddy Grant, Debbie Gibson, The Mission, Taylor Dayne, Sinead O'Connor, Tiffany and Jermaine Stewart.

SAT 00:00 Top of the Pops (m0006gzf)

Gary Davies and Nicky Campbell present the pop chart programme, first broadcast on 18 February 1988 and featuring Bomb the Bass, Billy Ocean, Was (Not Was), Vanessa Paradis, Michael Jackson, The Bangles, Coldcut ft. Yazz & The Plastic Population, Kylie Minogue, and Alexander O'Neal and Cherrelle.

SAT 00:30 The Rules of Film Noir (b00mbstz)

Bogey, Bacall and Mitchum play it tough as Matthew Sweet celebrates the hardboiled world of noir movies.

SAT 01:30 On Dangerous Ground (b0078973)

Film noir about a tough city policeman, Jim Wilson, who becomes increasingly stressed by his work and starts to take out his frustrations physically on suspects. He is sent to investigate a murder in a small town, where his eyes are opened by a meeting with a blind woman - the sister of the suspected killer - and the victim's vengeful father.

SAT 02:50 NASA: Triumph and Tragedy (b00lg2xb)
[Repeat of broadcast at 19:00 today]

SUNDAY 07 JULY 2019

SUN 19:00 John Denver at Wembley Arena (b03jgq83)
Country singer-songwriter John Denver performs in concert at Wembley Arena in 1979, featuring hits including Rocky Mountain High and Take Me Home, Country Roads.

SUN 19:40 BBC Proms (b07mn2kl)
2016

Finnish Folksong

Two Russian heavyweights and a living Scottish composer are the focus of tonight's prom, featuring the BBC Scottish Symphony Orchestra under the direction of chief conductor in waiting Thomas Dausgaard.

Finnish soloist Pekka Kuusisto performs Tchaikovsky's passionate and virtuosic Violin Concerto. It is followed by Petrushka, the first of a trio of landmark Stravinsky ballet scores for the Ballet Russes to be performed by Scottish orchestras.

The concert opens with a world premiere of the first part of a new BBC commission from Helen Grime. Two Eardley Pictures - I. Catterline in Winter was inspired by the landscape paintings of Joan Eardley and folk music of the far north east.

SUN 19:45 Summer Night Concert from Vienna (m0006pb4)
2019

BBC Four returns to the magnificent gardens of the Schönbrunn Palace in Vienna for a concert of classical favourites from North America performed by the Vienna Philharmonic, led by the charismatic Venezuelan conductor Gustavo Dudamel, including, with the dazzling virtuoso pianist Yuja Wang, Gershwin's Rhapsody in Blue. Presented by Katie Derham.

SUN 21:00 Arena (m0006pb9)
That Summer

The film project that artist Peter Beard initiated together with Jackie Kennedy's sister, Lee Radziwill, about her relatives, the Beales of Grey Gardens. Lost for decades, this extraordinary footage focuses on Beard and his family of friends, who formed a vibrant and profoundly influential creative community in Montauk, Long Island in the 1970s. Featuring Peter Beard, Lee Radziwill, Edith Ewing Bouvier Beale and Andy Warhol.

SUN 22:20 Rich Hall's California Stars (b04bbfzw)
Rich Hall continues his cultural critique of American people and places.

California has always been an empty sales pitch. Its first settlements were borne of missionary zeal. It promised a haven from marauders, bandits and mercenaries. Since then it has wiled us with unlimited gold, boundless harvests, silver-screen stardom, dotcom salvation and hi-tech silicon marvels. It has always been a place that promises a good chance of success - if you're youthful or white. And if you're Mexican, it at least promises a decent chance of survival.

The California dream has always eclipsed its facts or its history. Most other US states are named after geographical place names or Indian tribes or British royalty - New York, Nebraska, Maryland. California was named for Calafia, a mythical Spanish queen, a kind of Spanish Snow White. At the California History Attraction in Anaheim she is portrayed in a 20-minute film narrated by Whoopi Goldberg.

And that's California in a nutshell - a place that instantly forgets its past so it can reinvent it for tourists and dreamers. True reality has never been good enough for Californians. They are always vaguely dissatisfied with themselves, their bodies, their spirituality, their government and their present car. Yet they still believe they shape both American culture and American character. And to a large degree, they have.

In his unique and sardonic way, Rich takes the viewer on a skewed but keenly eyed journey to the place built on a tectonic faultline that still deigns to call itself the Land of Dreams.

SUN 23:50 Sound of Musicals with Neil Brand (b0888r7n)
Oh, What a Beautiful Mornin'

Series in which composer Neil Brand explores how musical theatre evolved over the last 100 years to become today's global phenomenon. Neil hears the inside story from leading composers and talent past and present, and recreates classic songs, looking in detail at how these work musically and lyrically to captivate the audience.

In the first episode, Neil finds out how the modern shape of the musical was established through a series of pioneering works, from Jerome Kern and Oscar Hammerstein's Show Boat in the

1920s with its bold take on America's racial divide and innovative use of songs that further the narrative, to Alan Jay Lerner and Frederick Loewe's My Fair Lady, which made a star of Julie Andrews in the late 1950s. Neil also reveals the songwriting secrets of some much-loved numbers, including 'Oh Man River, Oh, What a Beautiful Mornin'', and 'If I Loved You'.

SUN 00:50 Dazzling Duets at the BBC (b08j8j2l)

Dazzling duets from four decades of BBC entertainment, from Parkinson to the Proms. Whether it's pianos or banjos, violins or voices, kora, erhu or harmonica, this is a journey full of striking partnerships and extraordinary combinations. Oscar Peterson, Larry Adler, Ballake Sissoko, Kiri Te Kanawa, Nigel Kennedy and Bela Fleck are just some of the featured artists bringing us a musical feast, full of fun and surprises.

SUN 01:50 Summer Night Concert from Vienna (m0006pb4)

[Repeat of broadcast at 19:45 today]

SUN 03:05 John Denver at Wembley Arena (b03jgq83)
[Repeat of broadcast at 19:00 today]

MONDAY 08 JULY 2019

MON 19:00 Beyond 100 Days (m0006p9q)
Series 1

08/07/2019

The latest news, exploring the day's events from a global perspective.

MON 19:30 Great Continental Railway Journeys (b08h7zs8)
Series 4 - Reversions

Athens to Thessaloniki - Part 1

Armed with his 1913 Continental Railway Guide, Michael Portillo embarks on a Greek odyssey from Athens's port of Piraeus north to the city of Thessaloniki, captured the year before from the Ottoman Turks, who had ruled much of Greece for 400 years.

Exploring the Acropolis and delighting in the tastes of moussaka and baklava, Michael discovers the many influences at play in the creation of modern Greece - from its classical past to the oriental Ottomans and the great European powers of Britain, France and Russia.

Along the way, Michael discovers the parlous state of Greek finances at the time of his guidebook. He learns how an aristocratic English poet became a Greek national hero and relives Greek athletic victory at the first modern Olympic games.

Travelling through the Corinth Canal, Michael finds out about the surprisingly ancient origins of the modern railway. In Delphi, he discovers how at the turn of the 20th century an entire village was removed in order to excavate the site of the oracle.

Boarding one of the narrowest gauge railways in the world, the Little Train of Pelion, Michael travels to the village of Milies, where he learns about the place of the Orthodox Church in Greek national life. Michael ends his journey in Thessaloniki where, in 1913, Greece's King George I was assassinated.

MON 20:00 Life (b00nkpcp)
Mammals

Mammals dominate the planet. They do it through having warm blood and by the care they lavish on their young. Weeks of filming in the bitter Antarctic winter reveal how a mother Weddell seal wears her teeth down keeping open a hole in the ice so she can catch fish for her pup.

A powered hot air balloon produces stunning images of millions of migrating bats as they converge on fruiting trees in Zambia, and slow-motion cameras reveal how a mother rufous sengi exhausts a chasing lizard. A gyroscopically stabilised camera moves alongside migrating caribou, and a diving team swim among the planet's biggest fight as male humpback whales battle for a female.

MON 21:00 Natural World (b03fq319)
2013-2014

Killer Whales: Beneath the Surface

The killer whale was long feared as a sea monster until, in May

1964, one was brought into captivity for the first time. This spawned a journey of discovery into the killer whale's true nature.

It quickly became clear these were not mindless killers - they were, in fact, highly intelligent social creatures. Today, our understanding is deepening still further and the latest revelations are among the most sensational - not only will these top predators 'adopt' and care for injured and abandoned orphans, but it seems there's no longer just the 'killer whale'.

MON 22:00 In Search of Arcadia (b090c4f6)

Dr Janina Ramirez goes 'In Search of Arcadia' discovering the origins of the English landscape movement in a 12-mile stretch of the Thames between Hampton and Chiswick with waterman and historian John Bailey.

In the early 18th century this stretch of the river was home to a group of writers, poets, artists and garden designers who were inspired by classical landscapes of antiquity and the ancient idea of Arcadia.

Janina discovers the people and the ideas at the heart of this transformative movement and the landscape of the Thames - Nicholas Poussin's painting Et in Arcadia Ego, the French formal gardens at Hampton Court, Pope's Grotto, Marble Hill House, Chiswick House, Syon Meadows and finally the view from Richmond Hill.

John unpacks the role the River Thames played in their story as he explores the natural riches of its shores. He has time for fishing and contemplation along the way with his guide - Izaak Walton's Compleat Angler.

Janina starts with the most famous of Arcadian paintings, Et in Arcadia Ego by Nicholas Poussin, at Garrick's Temple in Hampton. She explains the ancient concept of Arcadia - a lost paradise where man and nature lived in perfect harmony. It's an idea that emerges in many cultures, but in Britain in the 17th and 18th century this ancient philosophy inspired a revolution in painting, writing, architecture and garden design.

Janina and John set off down the Thames on a traditional Thames wherry. John gives Janina his copy of Izaak Walton's fishing manual The Compleat Angler. Published in 1653 it's a book that has been reprinted over 400 times. John and Janina discover the book is much more than a practical fishing manual. It is also a philosophical treatise in which Izaak Walton first proposed an Arcadian philosophy; a vision of a world where man and nature lived in perfect harmony. He suggested that through the studied contemplation of the landscape, mankind could achieve a higher moral wisdom and virtuous understanding of the universe.

Janina and John arrive at Hampton Court Palace. John experiences Walton's philosophy first-hand, angling with fellow Walton enthusiast Keith Elliott. Janina explores the magnificent but formal Privy Gardens, commissioned by William III in 1702. Janina contemplates how at odds this formal garden is with the idea of a pastoral Arcadia. The formal French garden is beautiful and perfect, but nature is enslaved in it. This is very different to Izaak Walton's idea of Arcadia where man and nature co-exist in a perfect pastoral idyll. Two of Britain's greatest writers and poets, Joseph Addison and Alexander Pope, started a quiet rebellion against this subjugation of nature by publishing satirical articles in the Spectator and the Guardian.

Janina meets Dr Ross Wilson, a professor of English literature, in one of the oldest pubs in Twickenham. He explains why Pope - a writer - is often considered the true architect of the Arcadian movement. Pope built a house and a garden in Twickenham. They were demolished years ago, but one feature of the original estate still remains - Pope's Grotto. This man-made cavern became a retreat for Pope and is often considered the first museum of geology in Britain.

Next is Marble Hill House, home of King George II's mistress Henrietta Howard, a great friend and patron of Pope and the arts. Dr Esme Whittaker explains that Henrietta's patronage helped to accelerate the spread of this emerging cultural movement which sought to recreate classical scenes in the landscape.

Meanwhile, John is at Ham Lands with a group of volunteers restoring an original avenue using 'Arcadian' methods.

Palladian architecture also perfectly matched the emerging taste for naturalised gardens. These ideas were taken to the next level by wealthy and influential patrons including Lord Burlington. At Chiswick, Janina visits his Palladian villa set in one of the last remaining early examples of an English landscape garden. Joined by John Watkins, a specialist in the English landscape movement, she finds out how the ideas first expressed in Pope's garden were translated by others to create the naturalised garden at Chiswick.

Lord Burlington designed these gardens with royal gardener Charles Bridgeman and William Kent, whose famous protegee

was Capability Brown. And to see how Brown took these ideas to the next level, John heads out on the river with landscape historian Jason Debney to see one of the last remaining 18th-century Arcadian landscapes at Syon Meadows.

Finally Janina and John meet Sir David Attenborough and Kim Wilkie, patron and founder of the Thames Landscape Strategy on Richmond Hill overlooking the only view in Britain protected by act of Parliament. This view inspired JMW Turner to paint his famous landscape Richmond Hill in 1820, and it has barely changed since then. So if you had to sum up Arcadia in a word, a poem, a painting or a view - perhaps this is it.

MON 23:00 A303: Highway to the Sun (b0116ly6)

The A303 is the road that passes Stonehenge on the way to the beaches of Devon and Cornwall. On the way, it whisks drivers through 5,000 years of remarkable moments in British history. And it is the star of this film made for armchair travellers and history lovers.

Writer Tom Fort drives its 92-mile length in a lovingly restored Morris Traveller. Along the way he has many adventures - he digs up the 1960s master plan for the A303's dreams of superhighway status, meets up with a Neolithic traveller who knew the road like the back of his hand, gets to know a section of the Roman 303, uncovers a medieval murder mystery and discovers what lies at the end of the Highway to the Sun.

MON 00:00 Art of France (b08cgjv7)

Series 1

Plus Ça Change

Art historian and critic Andrew Graham-Dixon opens this series with the dramatic story of French art, a story of the most powerful kings ever to rule in Europe with their glittering palaces and astounding art to go in them. He also reveals how art emerged from a struggle between tradition and revolution, between rulers and a people who didn't always want to be ruled.

Starting with the first great revolution in art, the invention of Gothic architecture, he traces its development up until the arrival of classicism and the Age of Enlightenment - and the very eve of the revolution. Along the way some of the greatest art the world has ever seen was born, including the paintings of Poussin, Watteau and Chardin, the decadent rococo delights of Boucher and the great history paintings of Charles le Brun.

MON 01:00 Teenage Tommies (b04pcmz5)

In this moving tribute to the teenage heroes of the Great War, Fergal Keane unearths the most powerful stories of Britain's boy soldiers. With as many as 250,000 boys under the age of 18 having served in the British Army during World War I, and with every tenth volunteer lying about his age, Fergal finds out what made them enlist. Was it motivated by patriotism or the spirit of adventure?

Fergal follows the children into the trenches to see how they coped with the reality of war. He explores how, as the casualties began to mount, a movement grew in Britain to get them home. Fergal also meets the children and grandchildren of these former boy soldiers, uncovering heartrending but often uplifting stories and taking them on an emotional journey to the places where their ancestors trained and fought.

MON 02:00 Timeshift (b03mp53s)

Series 13

The Ladybird Books Story: The Bugs that Got Britain Reading

To millions of people, Ladybird books were as much a part of childhood as battery-powered torches and warm school milk. These now iconic pocket-sized books once informed us on such diverse subjects as how magnets work, what to look for in winter and how to make decorations out of old eggshells. But they also helped to teach many of us to read via a unique literacy scheme known as 'key words'. Ladybird books were also a visual treat - some of the best-known contemporary illustrators were recruited to provide images which today provide a perfect snapshot of the lost world of Ladybirdland: a place that is forever the gloriously ordinary, orderly 1950s.

MON 03:00 Life (b00nkpcc)

[Repeat of broadcast at 20:00 today]

TUESDAY 09 JULY 2019

TUE 19:00 Beyond 100 Days (m0006pbd)

Series 1

09/07/2019

The latest news, exploring the day's events from a global perspective.

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Series 4 - Reversions

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TUE 20:00 Men of Rock (b00wmxtk)

Moving Mountains

Geologist Iain Stewart retraces the steps of a band of maverick pioneers who made ground-breaking discoveries in the landscape of Scotland about how our planet works.

Iain finds out how gung-ho geologist Edward Bailey discovered Scotland was once home to super volcanoes. And how unsung hero Arthur Holmes solved the mystery of what makes continents move across the surface of the globe.

TUE 21:00 Charles I: Downfall of a King (m0006pbh)

Series 1

Two Worlds Collide

November 1641. King Charles I is in Edinburgh. While he is away from his capital, the leader of the House of Commons, John Pym, is plotting a move to limit the King's power. The duel between these two men will spiral across the next weeks into an irrecoverable split across the country.

21 November: Pym dominates a stormy debate in the House of Commons over a document known as the Grand Remonstrance. It is a list of 200 complaints against Charles I. It claims he is under the influence of 'evil counsellors', a coded reference to the Queen - Charles I's French Catholic wife, Henrietta Maria. In Ireland, a Catholic uprising, which has led to the deaths of thousands of Protestants, is focusing minds in Parliament.

It is one of the greatest debates in parliamentary history, lasting 14 hours. It is passed - 52% to 48%. The Grand Remonstrance - a vote of no confidence in the King's rule - will now be presented to the King.

25 November: Charles arrives back in London. He makes a show of power and parades through the city with 500 horsemen. The King having returned, discussion turns to the rebellion in Ireland. An army must be sent to crush the Catholic rebels, but who should lead it? Pym fears the King will use the army to suppress his opponents. And Charles fears Pym will use the army to arrest his Catholic queen.

The King fights back. He issues a proclamation on 12 December ordering all MPs to London by 12 January 1642. He is confident that, with a full House of Commons, he will have a majority with which to stamp out John Pym's faction. The clock is ticking. The deadline is set.

TUE 22:00 Art, Passion & Power: The Story of the Royal Collection (p05qqydb)

Series 1

Dangerous Magic

In a major four-part series, Andrew Graham-Dixon explores the

history of the Royal Collection, the dazzling collection of art and decorative objects owned by the Queen. Containing over a million items, this is one of the largest art collections in the world - its masterpieces by Van Dyck, Holbein, Leonardo da Vinci, Vermeer and Canaletto line the walls of Windsor Castle, Hampton Court and many other palaces, museums and institutions around Britain.

Andrew argues that on the surface, the Royal Collection projects permanence, but within these objects are stories of calamity, artistic passions and reinvention. Their collecting shows how these kings and queens wielded power, but it also reveals their personalities - it's through their individual passions that we see them at their most human.

In this first episode, Andrew marvels at the works acquired by the great founders of the modern Royal Collection - Henry VIII and Charles I. Henry VIII deployed the most essential rule of royal collecting, that great art projects great power. Andrew decodes The Story of Abraham among of tapestries in Hampton Court Palace's Great Hall, explaining how these luxury artworks contain a simple message for his terrified court - obedience.

But Henry also presided over the first great age of the portrait in England; his painter, Hans Holbein the Younger, was a magician who stopped time, preserving the faces of Henry's court forever. Andrew visits the Royal Collection's set of over 80 Holbein drawings in Windsor Castle's print room to see how the artist helped the English to understand themselves in a new way.

Henry VIII tried to overwhelm with magnificence, but for Charles I art was a way to compete with other kings through taste. He was our first connoisseur-king and the greatest royal collector in British history. It was a fateful journey to Spain to win the hand of a Spanish princess that opened Charles's eyes to the works of Titian and Raphael. But his transformation into a world-class collector was sealed with the wholesale purchase of the enormous art collection of the impoverished Mantuan court. The greatest of the Mantuan treasures were Mantegna's nine-picture series of The Triumphs of Caesar that Charles installed at Hampton Court. They are themselves a visual depiction of how power - and art - passes from the weak to the strong. Charles was top dog for now - but for how long?

Andrew explores how Charles I's Royal Collection introduced a new artistic language to British art. The sensuality of Titian and the epic canvases of Tintoretto, still in the Royal Collection today, were a revelation for a country whose visual culture had been obliterated by the Reformation. And we see how Sir Anthony van Dyck created a glamorous new style for the king that could have served as a new beginning for British art. But this was a future that would never happen - the English Civil War and Charles I's execution put an end to this first great age of royal collecting, with the king's artworks sold in 'the most extravagant royal car-boot sale in history'.

TUE 23:00 Forces of Nature with Brian Cox (b07m57mz)
The Pale Blue Dot

In this final episode Professor Brian Cox travels to Iceland, where the delicate splendour of a moonbow reveals the colours that paint our world, and he visits a volcano to explain why the sun shines. By exploring how sunlight transforms the plains of the Serengeti, drives the annual migration of humpback whales to the Caribbean and paints the moon red during a lunar eclipse, Brian reveals the colour signature of our life-supporting planet.

Finally, at an observatory high in the Swiss Alps, he shows how these colours aren't simply beautiful, but that understanding how they're created is allowing us to search for other Earths far out in the cosmos.

TUE 00:00 Sound Waves: The Symphony of Physics (b08h06tq)
Series 1

Making Sound

Dr Helen Czerski investigates the extraordinary science behind the sounds we're familiar with and the sounds that we normally can't hear.

She begins by exploring the simplest of ideas: what is a sound? At the Palace of Westminster, Helen teams up with scientists from the University of Leicester to carry out state-of-the-art measurements using lasers to reveal how the most famous bell in the world - Big Ben - vibrates to create pressure waves in the air at particular frequencies. This is how Big Ben produces its distinct sound. It's the first time that these laser measurements have been done on Big Ben.

With soprano singer Lesley Garrett CBE, Helen explores the science of the singing voice - revealing in intimate detail its inner workings and how it produces sound. Lesley undergoes a laryngoscopy to show the vocal folds of her larynx. At University College London, Lesley sings I Dreamed a Dream

inside an MRI scanner to reveal how her vocal tract acts as a 'resonator', amplifying and shaping the sound from her larynx.

Having explored the world of sounds with which we are familiar, Helen discovers the hidden world of sounds that lie beyond the range of human hearing. At the summit of Stromboli, one of Europe's most active volcanoes, Helen and volcanologist Dr Jeffrey Johnson use a special microphone to record the extraordinary deep tone produced by the volcano as it explodes - a frequency far too low for the human ear to detect. Helen reveals how the volcano produces sound in a similar way to a musical instrument - with the volcano vent acting as a 'sound resonator'.

Finally, at the University of Cambridge's Institute of Astronomy, Helen meets a scientist who has discovered evidence of sound waves in space, created by a giant black hole. These sounds are one million billion times lower than the limit of human hearing and could be the key in figuring out how galaxy clusters, the largest structures in the universe, grow.

TUE 01:00 The Silk Road (p03qb1gg)
Episode 1

In the first episode of his series tracing the story of the most famous trade route in history, Dr Sam Willis starts in Venice and explores how its Renaissance architecture and art has been shaped by the east and by thousands of exchanges along the Silk Road.

From Venice Sam travels to China's ancient capital, Xian. Here, Sam's story takes him back in time to reveal the tale of an emperor who was so desperate for horses to help protect his borders that he struck one of the most significant trade deals in human history - he wanted war horses, he gave the most precious material in the world, silk. From this single deal, a network of trading paths were carved out across thousands of miles by merchants, traders, envoys, pilgrims and travellers. It is known to us today as the Silk Road.

TUE 02:00 Men of Rock (b00wmxtk)
[Repeat of broadcast at 20:00 today]

TUE 03:00 Charles I: Downfall of a King (m0006pbh)
[Repeat of broadcast at 21:00 today]

WEDNESDAY 10 JULY 2019

WED 19:00 Beyond 100 Days (m0006p9s)
Series 1

10/07/2019

The latest news, exploring the day's events from a global perspective.

WED 19:30 Great Continental Railway Journeys (b08h80s0)
Series 4 - Revisions

The Black Forest to Hannover - Part 1

With his 1913 Bradshaw's in hand, Michael Portillo ventures deep into the Black Forest on a quest to discover the essence of Germany and discovers how Hansel and Gretel helped to unify the nation. A humbling master class in carving cuckoo clocks shows him how the nation's reputation for quality and reliability in manufacturing was established from the early 18th century.

A romantic stop at the ruined Schloss in Heidelberg follows before Michael gets an insider's guide to share dealing on the Frankfurt Stock Exchange.

At Goettingen University, Michael discovers two sides of student life at the turn of the 20th century - the duelling fraternities and the groundbreaking scientists, who laid the foundation for Germany's world-class transport technology today. Braving the force of the Goettingen wind tunnel, Michael investigates the track where model trains are fired at up to 360km per hour.

WED 20:00 Russia with Simon Reeve (b09714s7)
Series 1

Episode 2

The second leg of Simon Reeve's tour of modern-day Russia begins in Siberia and takes him to Russia's far south west and the majestic Caucasus Mountains.

From Lake Baikal, the oldest and deepest lake on Earth, Simon takes the Trans-Siberian Railway to the city of Krasnoyarsk, the

scene of brutal violence in the 1990s, and now the location of a cafe paying homage to Vladimir Putin.

Simon is introduced to a Siberian community that worships a former traffic cop they believe to be the reincarnation of Christ. Along with a rare interview with the messiah himself, Simon meets some of the daughters of his followers being educated to become future brides of worthy men.

After encounters with Tuvan throat singers and Cossack street patrols, Simon visits Dagestan, a largely Muslim region that has been scarred by jihadist violence. He meets security forces who use highly trained dogs to tackle the terrorist threat, and villagers attempting to keep their ancient tightrope-walking traditions alive.

WED 21:00 Charles I: Downfall of a King (m0006p9x)
Series 1

A Nation Divided

The King's proclamation has been sent around the country. Soon, over 200 MPs will return to Westminster to aid Charles; he simply has to run down the clock.

Pym tries to pass parliamentary bills limiting the King's power. But in the Lords, the casting votes are held by the bishops, who are loyal to Charles. Pym knows that, in order to succeed, he must remove them.

In mid-December, Pym's group goes for a political ambush, demanding that the Grand Remonstrance be published. They launch a surprise vote in the dead of night and win. Now the public will read of the King's supposed misdemeanours. Making matters worse for Charles, rumours spread that the Queen was involved in the Irish rebellion. The royal family now look as if they are in league with the Catholic rebels.

Trying to regain control on 22 December, Charles puts Colonel Thomas Lunsford in charge of the Tower of London. He is a thug, believed 'fierce enough to eat children'. Soon London goes wild with protests, swarming the Tower. After just a few days, with mobs braying at the palace gates, the King backtracks. This only encourages the rebels, who now see the King as weak and indecisive. Meanwhile, Charles's backstop of bishops run in fear of the mobs; just two come to the Lords the next day. The King's political frontline is broken. The way for Pym is open.

In a last-ditch attempt to win Pym round, King Charles offers him the top job, chancellor of the exchequer. Will Pym be bought off?

WED 22:00 Roundhead or Cavalier: Which One Are You? (b01hr7k9)

In the middle of the 17th century, Britain was devastated by a civil war that divided the nation into two tribes - the Roundheads and the Cavaliers. In this programme, celebrities and historians reveal that modern Britain is still defined by the battle between the two tribes. The Cavaliers represent a Britain of panache, pleasure and individuality. They are confronted by the Roundheads, who stand for modesty, discipline, equality and state intervention.

The ideas which emerged 350 years ago shaped our democracy, civil liberties and constitution. They also create a cultural divide that influences how we live, what we wear and even what we eat and drink. Individuals usually identify with one tribe or the other, but sometimes they need some elements of the enemy's identity - David Cameron seeks a dash of the down-to-earth Roundhead, while Ed Miliband looks for some Cavalier charisma.

Featuring contributions from Laurence Llewelyn-Bowen, AS Byatt, Julian Fellowes, Philippa Gregory, Anne Widdecombe and Clarissa Dickson Wright.

Are you a Roundhead or a Cavalier?

WED 23:00 The Beginning and End of the Universe (b0754t74)
The Beginning

Professor Jim Al-Khalili takes us back in time to tackle the greatest question in science: how did the universe begin? Uncovering the origins of the universe is regarded as humankind's greatest intellectual achievement. By recreating key experiments Jim unravels the cosmic mystery of science's creation story before witnessing a moment, one millionth of a second, after the universe sprang into existence.

WED 00:00 Sound Waves: The Symphony of Physics (b08h9ctd)
Series 1

Using Sound

Dr Helen Czerski examines the extraordinary messages sound waves carry and how they help us understand the world around us.

Visiting a hidden location buried beneath the hills of Scotland, Helen experiences some of the most extreme acoustics in the world. Here she learns just how much information can be carried by sound. She discovers how sound has driven the evolution of truly incredible biological systems and complex relationships between creatures that exploit sound for hunting - and escaping from predators. Helen demonstrates how sound waves diffract (bend around objects) and in doing so help us sense danger and locate it.

Through the story of a cochlea implant patient Helen explores the complicated way our ears can translate sound waves - a physical vibration in the air - into an electrical signal our brain can understand.

Helen explains how we are not limited to passively detecting sound waves, we can also use them to actively probe the world. From detecting submarines to uncovering the secrets of our planet, sound waves are instrumental in revealing things hidden from the world of light. On the cold North Sea, Helen investigates how marine archaeologists are using sound waves to uncover the remarkable human stories buried beneath the sea. Yet we are not limited to using sound waves here on Earth, as Helen explains how sound has been used to better understand distant, alien worlds in the outer solar system.

WED 01:00 The Silk Road (p03qb25g)
Episode 2

In the second episode of his series tracing the story of the most famous trade route in history, Dr Sam Willis travels west to Central Asia, a part of the Silk Road often overlooked and yet the place of major innovations, big historical characters and a people - the Sogdians - whose role was pivotal to its success.

In the high mountain passes of Tajikistan, Sam meets the last survivors of that race, who once traded from the Mediterranean to the China Sea. In the Uzbek cities of Samarkand and Bukara, he discovers how they were built by armies of captive craftsmen for one of the greatest conquerors the world has ever seen - Timur.

From here, Sam follows the flow of goods back towards the markets of the west, showing how their trading culture sparked cultural, technical and artistic revolutions all along the Silk Road, and goes back to school to learn where modern mathematics and astronomy were born.

WED 02:00 The Brontes at the BBC (b075dwrđ)

An exploration of the BBC's long love affair with the lives and works of the Bronte sisters - Charlotte, Emily and Anne. For over half a century, the ill-fated literary dynasty has proved irresistible to drama and documentary makers alike, keen to reinvent their novels for new audiences. So we get Bronte heroines reimagined for each emerging generation, first as classic 1950s housewife material, then wild child '60s 'chicks', Gothic waifs and, finally, empowered modern women. The Bronte males, meanwhile, are restyled as assorted prigs, wife-beaters, even brooding prog rockers and, of course, wouldn't you know it, new men. Wonderful stuff.

WED 03:00 Charles I: Downfall of a King (m0006p9x)
[Repeat of broadcast at 21:00 today]

THURSDAY 11 JULY 2019

THU 19:00 Beyond 100 Days (m0006p9w)
Series 1

11/07/2019

The latest news, exploring the day's events from a global perspective.

THU 19:30 Top of the Pops (m0006rh6)

Peter Powell and Mark Goodier present the pop chart programme, first broadcast on 25 February 1988 and featuring The Primitives, Morrissey, Vanessa Paradis, Rick Astley, The Sisters of Mercy, Eddie Cochran, George Harrison, The Mission, Eddy Grant, Kylie Minogue and The Bangles.

THU 20:00 The Queen's Palaces (b0151w1z)
Windsor Castle

Fiona Bruce visits Windsor Castle, the world's oldest and largest inhabited castle, dating back to the 11th century. Taking more than a thousand years to reach its familiar look, it has been a fortress, a home to medieval chivalry, a baroque palace, and

finally a romantic fantasy.

From the bowels of the castle to the heights of the battlements, Fiona encounters all manner of royal treasures - from the musket ball that killed a naval hero to table decorations in gold and silver and encrusted with jewels; from the triple-headed portrait of a king who lost his head to Queen Mary's dolls' house with running taps, and a secret garden hidden in a drawer. All of this was almost lost in the disastrous fire of 1992.

THU 21:00 Charles I: Downfall of a King (m0006pb8)
Series 1

The Final Showdown

The beginning of 1642 has seen John Pym spurn the King's attempt to bring him inside with a job offer and now Charles's options are running short. He has just one chance left: arrest Pym and his colleagues. On Monday 3 January, Charles strikes, accusing the 'Five Members' of high treason.

The Commons prevaricate. Pym hopes that Charles will throw caution to the wind and resort to violence. Pressure is mounting; rumours of the Queen's imminent impeachment reach Charles. On 4 January, Charles marches on Westminster, backed by 500 troops.

Pym, however, has been tipped off by someone on the inside: the Queen's lady-in-waiting, Lucy Hay. She is the viper in the nest. As Charles storms through the front door, Pym and his associates slip out by the back.

Charles enters the chamber of the Commons, breaching 'parliamentary privilege'. Armed troops wait outside, pistols cocked. The atmosphere is tense, the politicians are silent; they fear a blood bath. The King soon realises that his quarry has escaped and is forced to retreat. MPs' cries of 'Privilege! Privilege!' follow him. He has failed and leaves humiliated.

Pym's plan has worked; Charles looks like a tyrant to all in Westminster. Moderates now flock to Pym's side.

Within days, Pym compounds his win by gaining the support of the Citizens' Militia - a force of 10,000 men. Charles realises his wife's life is in danger. On 10 January, he escapes with his family to Hampton Court Palace. He has lost his capital and his power. The next time he returns to London, it will be for his execution.

THU 22:00 Blood and Gold: The Making of Spain with Simon Sebag Montefiore (b06rvgp7)
Conquest

In the first episode, Simon explores Spain's early years, its emergence as the battleground of empires and its golden age under the Cordoba Caliphate.

THU 23:00 The Beginning and End of the Universe (b075dxsq)
The End

Professor Jim Al-Khalili carries us into the distant future to try to discover how the universe will end - with a bang or a whimper? He reveals a universe far stranger than anyone imagined and, at the frontier of our understanding, encounters a mysterious and enigmatic force that promises to change physics forever.

THU 00:00 Top of the Pops (m0006rh6)
[Repeat of broadcast at 19:30 today]

THU 00:30 Handmade on the Silk Road (b079cgml)
The Weaver

The Uyghur community in north west China have been making atlas silk for thousands of years. Mattursun Islam and his family are continuing the tradition, using a combination of handmade techniques and mechanised looms. From designing the patterns to colouring, dyeing and weaving the thread, this film follows each stage in absorbing detail. We also get an engaging glimpse into how their family and working life are closely connected. With rival companies often copying his designs, Mattursun is proud of his reputation. But he and his wife also enjoy a good-natured rivalry over who really runs things.

THU 01:00 The Silk Road (p03qb3q4)
Episode 3

In the final episode of his series tracing the story of the most famous trade route in history, Dr Sam Willis continues his journey west in Iran. The first BBC documentary team to be granted entry for nearly a decade, Sam begins in the legendary city of Persepolis - heart of the first Persian Empire.

Following an ancient caravan route through Persia's deserts, he visits a Zoroastrian temple where a holy fire has burned for 1,500 years, and Esfahan, one of the Silk Road's architectural jewels and rival to Sam's next destination - Istanbul. In the ancient capital of Byzantium, Sam discovers how the eastern Roman Empire was ruled through silk and how Venetian merchants cashed in on the wealth and trade it generated.

Sam's last stop takes him full circle to Venice. Visiting Marco Polo's house, Sam reminds us how the great traveller's book was one of the first to link east to west and how the ideas and products that trickled down the Silk Road not only helped to trigger the Renaissance, but set Europe on a path of unstoppable change.

THU 02:00 Timeshift (b06csy8c)
Series 15

The Engine that Powers the World

The surprising story of the hidden powerhouse behind the globalised world, the diesel engine, a 19th-century invention that has become indispensable to the 21st century. It's a tortoise-versus-hare tale in which the diesel engine races the petrol engine in a competition to replace ageing steam technology, a race eventually won hands down by diesel.

Splendidly, car enthusiast presenter Mark Evans gets excitedly hands-on with some of the many applications of Mr Diesel's - yes, there was one - original creation, from vintage submarines and tractors to locomotive trains and container ships. You'll never feel the same about that humble old diesel family car again.

THU 03:00 Charles I: Downfall of a King (m0006pb8)
[Repeat of broadcast at 21:00 today]

FRIDAY 12 JULY 2019

FRI 19:00 The Wonder of Animals (b04dzrtp)
Bears

Bears can live in practically every habitat on Earth, from tropical jungles to the Arctic Ocean. Wherever they are found, they are capable of surviving extreme conditions and extracting the highest-quality food.

Detailing the latest research, Chris Packham explores the specialised adaptations that have enabled bears to thrive, including how a polar bear's hollow fur allows it to feed throughout the gruelling Arctic winter, whilst a state of 'walking hibernation' sees it through the summer months.

FRI 19:30 Top of the Pops (m0006pb2)

Gary Davies and Simon Mayo present the pop chart programme, first broadcast on 03/03/1988. Featuring Erasure, Rick Astley and The Sisters of Mercy.

FRI 20:00 Top of the Pops (m0001wdv)
1987 - Big Hits

As BBC Four's weekly repeats of Top of the Pops reach 1987, we celebrate this high watermark of hits with some classic TOTP performances from this spectacular year. The programme includes studio appearances from Rick Astley with Never Gonna Give You Up to the godfather of punk, Iggy Pop, whose unforgettable appearance on the show is one not to be missed!

The programme also honours Manchester's finest, New Order, and Scottish soft rockers Wet Wet Wet, along with pop royalty Whitney Houston, Curiosity Killed the Cat, Boy George, The Bee Gees, The Pogues and a rare TOTP sighting of Eric B & Rakim. Pepsi and Shirlie, and many more are also poured into the mix, providing that perfect measure of definitive 80s pop.

FRI 21:00 Classic Albums (m0006pbp)

The Crickets: The 'Chirping' Crickets

When lanky and bespectacled 20-year-old Texan singer Buddy Holly walked into the independent studio of producer Norman Petty in February 1957, he thought he'd come to make some demos to save his already failing music career as a two-flop wonder. By the time he had left the next morning, he had recorded not only his first million-selling smash - the immortal 'That'll Be the Day' - but the beginnings of one of the first, and greatest, rock 'n' roll albums of all time - The 'Chirping' Crickets.

Among the first half-dozen debuts by rock 'n' roll's original founders (preceded only by those of Elvis Presley, Gene Vincent, Little Richard and Chuck Berry), more significantly it

was the first rock album credited to a band rather than a solo artist, as well as a landmark in the history of independent recording methods. It was the album that inspired John Lennon to form his first band with Paul McCartney, The Quarrymen, and one of the first LPs bought by 15-year-old Dartford schoolboy Keith Richards: famously, both The Beatles and The Rolling Stones would later cover songs from The 'Chirping' Crickets.

Crowned by four of Holly and The Crickets' best-loved and biggest-selling singles - That'll Be the Day, Not Fade Away, Maybe Baby and Oh, Boy! - the album was one of only two Buddy Holly recorded in his tragically brief career. He died in a plane crash at the age of only 22, just one year and ten weeks after the album's release. Yet it survives as the purest testament to his skill and diversity as a singer, a pioneering guitar player and, not least, as a songwriter in an age when few of his peers composed their own material. As such, The 'Chirping' Crickets stands as one of the most influential and important long-playing pieces of vinyl in the evolution of popular music. Without it, the last six decades of rock 'n' roll would look, and sound, dramatically different.

The 'Chirping' Crickets finally landed in November 1957, its cover presenting a unified front of the four members side by side, with no special emphasis on Holly. Yet all too soon, their leader's fame would eclipse what had always been a clever, legally convenient illusion of democracy. Within a year of its release, after just one more Crickets single, Think It Over, Sullivan left and Holly, though still recording with Allison and Mauldin, was starting to be seen as a solo artist.

The Crickets nevertheless left behind not just a classic but also rock's first group debut: the twelve-track, twelve-inch vinyl blueprint of the archetypal vocals-guitars-bass-and-drum formula that has kept the genre alive for 60 years since its release, and counting.

FRI 22:00 Roy Orbison: One of the Lonely Ones (b06t3vb9)

Biography of iconic rock balladeer Roy Orbison told through his own voice, casting new light on the triumphs and tragedies that beset his career. Using previously unseen performances, home movies and interviews with many who have never spoken before, the film reveals Orbison's remote Texas childhood, his battles to get his voice heard, and how he created lasting hits like Only the Lonely and Crying.

The film follows Roy's rollercoaster life, often reflected in the dark lyrics of his songs, from success to rejection to rediscovery in the 80s with The Traveling Wilburys supergroup. It uncovers the man behind the shades, including interviews with his sons, many close friends and collaborators like Jeff Lynne, T Bone Burnett, Bobby Goldsboro and Marianne Faithfull.

FRI 23:00 Roy Orbison and Friends: A Black and White Night (b00g6349)

First broadcast in 1988 and filmed in black and white (hence the title!), this TV concert classic features Roy Orbison performing his classic songs with friends like Bruce Springsteen, Tom Waits, Elvis Costello, Jackson Browne, kd lang, Jennifer Warnes and Bonnie Raitt.

The TCB Band which backs all featured artists was Elvis Presley's band till his death in 1977 and includes James Burton, Glen D Hardin, Jerry Scheff and Ronnie Tutt with musical director T Bone Burnett.

Filmed at the Coconut Grove nightclub in Los Angeles, the show was first broadcast on HBO in 1988, the year of Roy Orbison's death.

FRI 00:00 Top of the Pops (m0006pb2)

[Repeat of broadcast at 19:30 today]

FRI 00:30 Top of the Pops (m0001wdv)

[Repeat of broadcast at 20:00 today]

FRI 01:30 Classic Albums (m0006pbp)

[Repeat of broadcast at 21:00 today]

FRI 02:30 Indie Classics at the BBC (b06g5jfp)

A look back through the archives at some of the classic tunes from the world of indie music through the 80s and early 90s, including the likes of Joy Division, Depeche Mode, The Smiths, Cocteau Twins, Primal Scream and many more.